

# **EXHIBIT 6**

## **Filed Under Seal**

REBUTTAL EXPERT REPORT OF DR. KEVIN C. ALMEROOTH

1 21, 2022 Order and Claim Construction Developments” in which he sets forth various  
2 characterizations of the Court’s July 21, 2022 order, Sonos’s claim construction positions, and the  
3 alleged implications on the scope and meaning of the Asserted Claims of the ’885 and ’966 Patents.  
4 That section includes 4 sub-sections, which are entitled (1) “Zone Scene,” (2) “Indication,” (3)  
5 “Standalone,” and (4) “Written Description.”

6 186. I find Dr. Schonfeld’s characterizations of the Court’s July 21, 2022 order and its  
7 alleged implications on the scope and meaning of the Asserted Claims of the ’885 and ’966 Patents  
8 to be flawed for various reasons, which I have outlined below in four sub-sections that correspond  
9 to the four sub-sections set forth in Dr. Schonfeld’s Opening Report.

10 **1. Dr. Schonfeld’s “Zone Scene” Sub-Section**

11 187. I disagree with several of Dr. Schonfeld’s statements in his “Zone Scene” sub-  
12 section regarding the Court’s July 21, 2022 order and “claim construction developments.”

13 188. First, Dr. Schonfeld states that “the Court indicated it understood ‘zone scene’ as  
14 ‘a previously-saved grouping of zone players according to a common theme.’” Schonfeld Op.  
15 Report at ¶ 97. I disagree – in my opinion, this is not an accurate characterization of the Court’s  
16 July 21, 2022 order as it relates to the term “zone scene.”

17 189. As explained above, the Court began its analysis of whether Google’s products  
18 include the claimed “zone scene” functionality by stating as follows:

19 Google argues that the accused products do not allow users to form a “zone scene,”  
20 which it proposes defining as “a previously-saved grouping of zone players  
according to a common theme” (Opp. 4–7). Even assuming, *arguendo*, that this is  
21 the proper construction of “zone scene,” this order concludes that the accused  
products meet this limitation.

22 D.I. 309 at 7. It is clear from this statement that the Court was only applying Google’s proposed  
23 construction of “a previously-saved grouping of zone players according to a common theme” for  
24 purposes of evaluating Google’s non-infringement arguments under that proposed construction,  
25 and was not stating that the Court “understood” this to be the meaning of “zone scene.” Moreover,  
26 elsewhere in its July 21, 2022 opinion, the Court described a “zone scene” as a user-customized,  
27 pre-saved group that is able to exist in an uninvoked state (during which time the group members  
28

1 can operate individually or as part of other groups) while remaining available for selection by a  
2 user so that the group can be invoked later on demand for synchronous playback. *Id.* at 4-5, 8, 12,  
3 13, 15-16. In my opinion, this description more completely and accurately reflects the Court's  
4 understanding of a "zone scene."

5 190. Second, Dr. Schonfeld states that "based on the Court's Order, I understand the  
6 Court to consider that a 'zone scene' does not require certain attributes such as volume control,  
7 nor does a 'zone scene' require anything beyond a named speaker group that can be saved and  
8 later invoked." Schonfeld Op. Report at ¶ 100. I agree with the first half of this statement – the  
9 Court has indeed made clear that "a 'zone scene' does not require certain attributes such as volume  
10 control" – but I disagree that the second half of this statement is a complete and accurate  
11 characterization of the Court's July 21, 2022 order as it relates to the term "zone scene."

12 191. In particular, Dr. Schonfeld appears to be suggesting here that the only thing  
13 required to qualify as a "zone scene" is "a named speaker group that can be saved and later  
14 invoked," but this characterization fails to account for several other key aspects of a "zone scene"  
15 that were recognized by the Court, including that the group defined by the "zone scene" is (i)  
16 "customized" by a "user," (ii) able to exist in an invoked (or inactivate) state during which time  
17 the group members "operate individually" (or as part of other groups), and (iii) remains available  
18 for selection by a user while in an invoked state so that the "zone scene" can be "later invoke[d]"  
19 by the user "on demand for synchronized playback." D.I. 309 at 4-5, 8, 12, 13, 15-16.

20 192. Third, Dr. Schonfeld makes the following statement regarding the Court's  
21 discussion of "zone scene":

22 In my opinion, because the Court's July 21, 2022 Order takes broad positions with  
23 respect to the meaning of certain claim terms, such as "zone scene," it accordingly  
24 expands the scope of prior art and prior art combinations which invalidate the '885  
25 patent. By way of background, the ability to stream music already existed in 2004,  
26 as did home stereo systems which enabled users to have different speakers in  
27 different rooms. *See supra*. And the ability to group and name different items, e.g.,  
28 songs or playlists, was well known by 2005. . . . For example, I understand Sonos  
considered the iPod, which allowed for saved playlists and could be used to play to  
speaker systems, and its scroll-wheel as part of its design.

Schonfeld Op. Report at ¶ 100. I disagree with this statement for several reasons.

1       193. As an initial matter, I disagree with Dr. Schonfeld's statement that "the Court's July  
2 21, 2022 Order takes broad positions with respect to the meaning of certain claim terms, such as  
3 'zone scene.'" *Id.* In my opinion, the Court's description of a "zone scene" in its July 21, 2022  
4 order is entirely consistent with the intrinsic evidence – which similarly describes a "zone scene"  
5 as a user-customized, pre-saved group that is able to exist in an uninvoked state (during which  
6 time the group members can operate individually or as part of other groups) while remaining  
7 available for selection by a user such that the group can be invoked later on demand for  
8 synchronous playback – so I fail to see how this constitutes a "broad position[]" with respect to  
9 the meaning of "zone scene." Dr. Schonfeld's statement to the contrary appears to be based on his  
10 incomplete and inaccurate characterization of how the Court "understood" the meaning of "zone  
11 scene," his own flawed interpretation of the meaning of a "zone scene," or both.

12       194. Relatedly, I disagree with Dr. Schonfeld's statement that the Court's July 21, 2022  
13 order "expands the scope of prior art and prior art combinations which invalidate the '885 patent."  
14 *Id.* Again, the Court's description of a "zone scene" is entirely consistent with the intrinsic  
15 evidence, so I fail to see how the Court's July 21, 2022 order "expand[ed]" anything, and I also  
16 fail to see the relevance of Dr. Schonfeld's statement here given that the Court already entered  
17 summary judgment of validity of the '885 patent. But in any event, for the reasons I already  
18 explained in my '885 Rebuttal Report, I disagree that Asserted Claim 1 of the '885 Patent is invalid  
19 over any of the prior art or prior art combinations identified by Dr. Schonfeld.

20       195. Fourth, Dr. Schonfeld makes the following statement regarding the Court's  
21 discussion of "zone scene":

22       Effectively, I understand the Court's Order to generally equate a "zone scene" with  
23 a "zone group" that can be named and saved, but this is disclosed and/or rendered  
24 obvious by the prior art, along with (i) the ability to have speakers in overlapping  
25 zone scenes, and (ii) the ability for speakers to operate in standalone mode even  
26 after being added to a "zone scene"—under the Court's holding regarding "zone  
27 scene."

28       Schonfeld Op. Report at ¶ 101. I also disagree with this statement for several reasons.

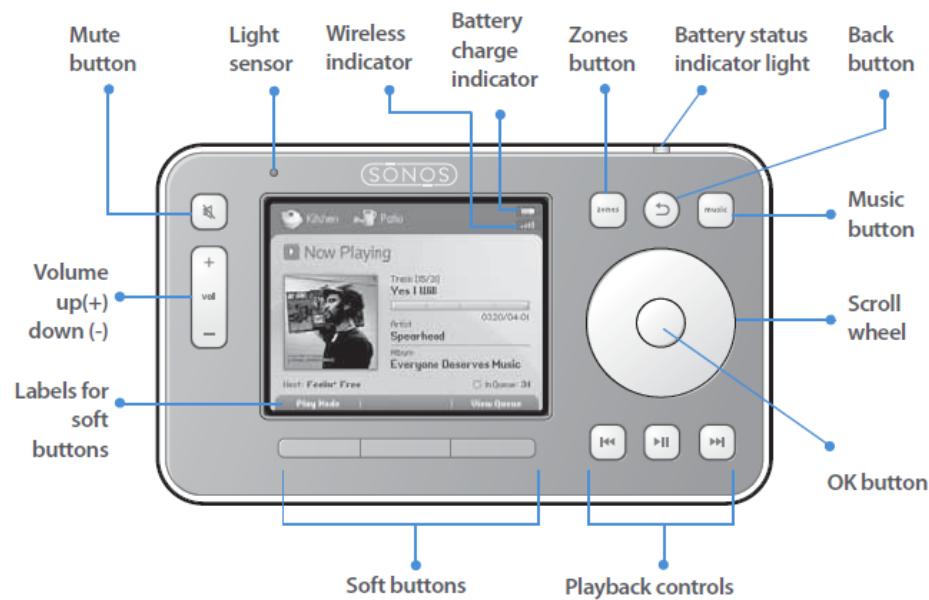
196. As an initial matter, the Court's July 21, 2022 order did not "equate a 'zone scene'"  
2 with a 'zone group' that can be named and saved." Further, this statement is premised on yet  
28

1 9, 2023 discussion with Mr. Lambourne, it is my opinion that the inventions of the Asserted Claims  
2 of the '966 Patent were conceived by no later than December 21, 2005. I discuss in detail below  
3 the bases for my opinion.

4 240. In addition, it is my opinion that the '407 Provisional, having a filing date of  
5 September 12, 2006, constitutes a constructive reduction to practice of the Asserted Claims of the  
6 '966 patent because it discloses the subject matter of the Asserted Claims of the '966 Patent, as  
7 demonstrated in the table above, and does so in a manner that meets the enablement and written  
8 description requirements.

9 241. The evidence I reviewed shows that, by December 21, 2005, Sonos began actively  
10 working towards a system comprising a networked-enabled computing device of the time (e.g.,  
11 the CR100 and the Sonos "Desktop Controller" (also referred to as "DCR")) that meets each  
12 Asserted Claim of the '966 Patent (the claimed "computing device"), as well as one or more of  
13 Sonos's network-enabled audio players of the time (e.g., the ZP100). *See* SONOS-SVG2-  
14 00026839 - SONOS-SVG2-00026858; Lambourne Dep. Tr. 61:23-63:6, 66:1-19, 85:17-86:9;  
15 1/9/2023 Discussion with Mr. Lambourne. Prior to December 21, 2005, Sonos released a system  
16 including the Sonos CR100 Controller and the Sonos Desktop Controller software, which, as the  
17 parties do not dispute, included the hardware elements recited in Asserted Claim 1 of the '966  
18 Patent. *See, e.g.*, Sonos's Validity Contentions, Attachment A to Sonos's Supp. Response to  
19 Google's First Set of Rogs, at 39-43; Schonfeld Op. Report at ¶¶ 124-174; Lambourne Dep. Tr.  
20 84:16-87:7; Lambourne Dep. Exs. 1077-78; 7/19/2022 Discussion with Mr. Millington; 1/9/2023  
21 Discussion with Mr. Lambourne. Mr. Lambourne was familiar with and involved in the  
22 development of this system, including working directly on the various controllers (e.g., the CR100  
23 and Desktop Controller) for the ZP100. *E.g.*, Lambourne Dep. at 86:2-5; 153:5-154:8; SONOS-  
24 SVG2-00026625-26751; 1/9/2023 Discussion with Mr. Lambourne. The evidence also shows that  
25 Mr. Lambourne viewed his "Zone Scenes" concept as capable of being used in conjunction with  
26 the Sonos CR100/Desktop Controller system. *See, e.g.*, SONOS-SVG2-00026839 - SONOS-  
27 SVG2-00026858 at 26840-53; SONOS-SVG2-00026625-26751; 1/9/2023 Discussion with Mr.  
28 Lambourne.

1       265. ZonePlayers could be positioned about a user's house and could be given names  
2 reflecting the rooms in which the ZonePlayers were located, such as "Kitchen," "Jack's Bedroom,"  
3 or "Garden." Operationally, each ZonePlayer was configured to retrieve media from one or more  
4 music sources that were either located on a user's home storage device, such a network-accessible  
5 storage device, or via a music service accessible via the Internet, such as Rhapsody, among others.  
6 The controllers of Sonos's 2005 system were configured to browse the available music libraries of  
7 the music sources and to control the ZonePlayers within the system to retrieve and output media  
8 from the music sources. The controllers of Sonos's 2005 system were also operable to control the  
9 ZonePlayers' playback of audio, including adjusting the volume of playback, skipping to a  
10 previous or next track, and pausing the playback, etc. The below image illustrates one example of  
11 a Sonos CR100 Controller:



22       Sonos 2005 User Guide (Lambourne Dep. Exs. 1077-1078), at 60.

23       266. The controllers of Sonos's 2005 system were also operable to group the  
24 ZonePlayers within the system together into "zone groups," which were groups of two or more  
25 ZonePlayers that were configured to coordinate with one another over the data network to output  
26 audio in synchrony. The Sonos 2005 User Guide includes a section entitled "Zone groups" where  
27 it describes the grouping capabilities of the Sonos ZonePlayers that existed at the time. That "Zone  
28

1           B.     Sonos Forums

2       272. Dr. Schonfeld's "Sonos Forums" reference consists of forum posts from two  
3 separate threads: (1) a thread entitled "Macro / presets," and (2) a thread entitled "virtual zones  
4 and zone grouping." Schonfeld Op. Report at ¶¶ 175-182. In his Opening Report, Dr. Schonfeld  
5 opines that "the Sonos Forums were publicly available at least as of September 2005, making them  
6 prior art under 35 U.S.C 102(a), 102(b), and 102(f)." *Id.* at ¶ 175. I disagree – in my opinion, the  
7 Sonos Forums reference, as a whole, does not qualify as prior art, and Dr. Schonfeld's opinion to  
8 the contrary is flawed for several reasons.

9       273. First, the Sonos Forums reference, as a whole, does not qualify as prior art under  
10 §102(a). Specifically, Dr. Schonfeld has relied on several posts from the "Macro / presets" thread  
11 that are dated after the claimed conception date of December 21, 2005. Thus, I understand that  
12 these posts do not qualify as prior art under §102(a). In fact, there are only 4 posts from the "Macro  
13 / presets" thread (dated from September 22, 2005 to September 27, 2005) that could qualify as  
14 prior art under §102(a), since every other post in that thread is dated no earlier than June 3, 2006.  
15 These posts are reproduced below:

16

17           **Macro / presets**

18           16 years ago • 61 replies • 15122 views

19           22 September 2005

20           J

JeffT Trending Lyricist I • 20 replies

21       Just got the intro bundle, and I am impressed. I did a search and did not find this suggested, but I  
22 would save Zone links as favorites. With only 2 ZPs it is not a problem yet, but when I add more it  
23 maybe. I would like to setup say Morning mode for the units I want in the morning and a preset  
volume between the units. Another example I would have 2 party modes, Summer and Winter. The  
Summer mode would include the deck speakers and the Winter mode would not. Also it would be  
nice to have playlists or radio station associated with each mode. So when I get up I press Morning  
the DI Chill radio station plays.

24           Jeff

kengreenwood Contributor III • 75 replies

16 years ago

I would find this functionality useful as well... I find myself manually linking and unlinking zones and setting volumes in a very repetitive way. I would think that a macro type function would be able to save those manual steps into a single selection of a favorite.

Like      "Quote

Majik · 6113 replies

16 years ago

22 September 2005

Something like the ability to create a "zone group" which appears on the zone list, and perhaps the ability to hide/lock individual zones.

I'm not sure how the "Preset volume" and source/playlist would work in this context. You wouldn't necessarily want this activated every time you selected the zone group, or how would you select the group to change the volume, etc.?

Perhaps we need a "presets", page (perhaps using the soft-keys on the Zone screen) to allow a preset to be initiated. This preset could comprise a zone (or zone group), a volume profile, and a source or playlist, or it could be a macro sequence.

Discuss.... :)

Cheers,

Keith

floras\_dad Lyricist III • 20 replies

16 years ago

Great idea. A macro-like scripter would enable you to set groups of zones, associate playlists/i-radio, volumes, etc. You could do these as dynamic "presets" based on the Party Mode--which the spouse would love--like Entertaining, Romantic Dinner, Ambiance, etc.

This is a great like-to-have.

 Like  Quote

GOOG-SONOS-WDTX-INV-00015877 at 877-78.

23        274. Likewise, Dr. Schonfeld has relied on several posts from the “virtual zones and  
24 zone grouping” thread that are dated after the claimed conception date of December 21, 2005.  
25 Thus, I understand that these forum posts do not qualify as prior art under §102(a). In fact, there  
26 are only 5 posts from the “virtual zones and zone grouping” thread (dated from February 27, 2005  
27 to February 28, 2005) that could qualify as prior art under §102(a), since every other post is dated  
28 no earlier than April 18, 2006. These posts are reproduced below:

1 provides the following instructions for how to use the ROOM button to set up a “shared source”  
2 in multiple rooms:

3 **Setting up a shared source**

4 Now, let’s say the system is already on and you want to play the FM radio in rooms A and B:

- 5 1. Wake up the Personal music center.
- 6 2. Press the ROOM button until the room indicator **A** is displayed. Press the FM source  
button and adjust the volume to the desired level for room A.
- 7 3. Press the ROOM button again to select room **B**. Press the FM source button and adjust  
the volume to the desired level for room B. Now, the indicators **A B** are displayed.
- 8 4. Press the ROOM button again. The indicators **A B** appear on the display indicating that  
you can control these two rooms together. Any button command given now (SOURCE,  
9 VOLUME, MUTE, ON/OFF, SLEEP) is applied to both rooms.

10 *Id.*

11 359. The Bose Lifestyle 50 Guide discloses that the HOUSE button enables a user to  
12 “link all rooms together and control them as one,” such that “[a]ny button pressed after that (any  
13 source button, VOLUME, MUTE, or SLEEP) affects every room”:

15 **Using the HOUSE button**

16 Using the HOUSE button, you can link all rooms together and control them as one. When you  
17 press the HOUSE button, an empty box indicator is displayed for each connected room. Any  
18 button pressed after that (any source button, VOLUME, MUTE, or SLEEP) affects every room.  
When you are done listening you can press OFF to turn off the entire system.

19 ‘ **Note:** If you do not press any additional buttons after pressing HOUSE, pressing HOUSE  
again cancels HOUSE mode.

20 *Id.* at 45. In this way, a user can use the HOUSE button followed by a source button to set up a  
21 shared source for all rooms A-D in their home.

22 360. Notably, neither the Bose Lifestyle 50 Guide nor any of the other evidence I have  
23 reviewed discloses anything about what specific information is transmitted from the Personal  
24 Music Center to the Multi-Room Interface as a result of “link[ing]” rooms together and setting up  
25 a “shared source.” However, based on the evidence I have reviewed, it appears that no information  
26 would be sent from the Personal Music Center to the Multi-Room Interface until at least the user  
27 selects the source at which point the Personal Music Center would send some sort of information  
28 to the Multi-Room Interface to cause the Multi-Room Interface to configure itself to distribute

1 audio from the selected audio source to the selected room(s). *See, e.g.*, BOSE\_SUB-0000001-55  
2 at 6 (“The Bose multi-room interface, with four independent audio outputs that allow you to enjoy  
3 Bose sound throughout your home.”), 12 (illustrating a Bose Lifestyle 50 System configuration  
4 with a CD player and an Acoustimass module connected the Multi-Room Interface), 17  
5 (illustrating various audio sources connected to Multi-Room Interface via audio input cables), 19  
6 (“When batteries are first installed in the music center; it sets up a radio-frequency link with the  
7 closest multi-room interface.”), 44-45 (explaining how to use ROOM and HOUSE buttons to set  
8 up an audio source for one or more rooms).

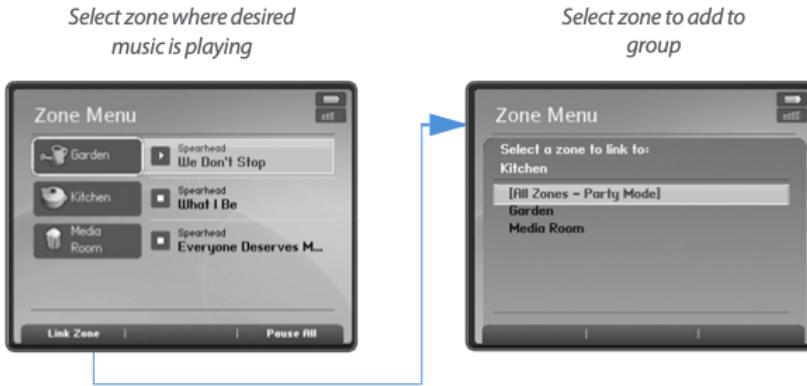
9       361. Based on my review of the Bose Lifestyle 50 Guide, it is my opinion that the Bose  
10 Lifestyle 50 System is a type of conventional audio system with a centralized Multi-Room  
11 Interface that is hard-wired to one or more Acoustimass modules so that audio could be distributed  
12 from the centralized Multi-Room Interface to the “Acoustimass module(s)” and then to the wired  
13 Jewel cube Speakers. *See* BOSE\_SUB-0000001-55 at 11-12. A POSITA would not consider the  
14 Multi-Room Interface and the Acoustimass modules to be operating on a data network because the  
15 hard-wired connection described in the Bose Lifestyle 50 Guide is not a medium that interconnects  
16 devices, enabling them to send digital data packets to and receive digital data packets from each  
17 other. In contrast, the ’966 Patent is specifically directed to *networked* multimedia systems that  
18 operate on local and wide area *data networks*, which are distinctly different from conventional  
19 multimedia systems such as the Bose Lifestyle 50 System. *Compare* ’966 Patent at 4:39-5:15, Fig.  
20 1 *with* 1:46-2:16.

21       362. Likewise, applying Sonos’s constructions of “zone player” and “data network,”  
22 neither a Jewel Cube speaker, nor an Acoustimass module, nor an SA-2 or SA-3 amplifier is a  
23 “first zone player” because these devices (i) are not data network devices that can send digital data  
24 packets to and receive digital data packets from another device and (ii) are not capable of  
25 performing any digital data processing on the audio before outputting it. Instead, the evidence I  
26 have reviewed shows that a Jewel Cube speaker merely receives an audio signal over an audio  
27 cable from an Acoustimass module or SA-2 or SA-3 amplifier and outputs audio, and that an  
28 Acoustimass module or SA-2 or SA-3 amplifier receives an audio signal over an audio cable from

1 505. The Sonos 2005 User Guide also includes a similar “Zone groups” section in the  
2 chapter on the Sonos CR100 Controller, as shown below:

3 **To add a zone to a zone group**

- 4 1. Touch the **Zones** button on your Controller.



- 11 2. Highlight the zone or zone group you want to add a zone to, and touch **Link Zone**.



13 Note: The order in which you add a zone makes a difference. If you select **Link Zone** from a zone where there is no music playing, any zone you link to it will also be  
14 silent.

- 15 3. Highlight the zone you want to add to the group, and touch **OK**. If you want to  
16 join all the zones in your house to this music queue, select **All Zones-Party Mode**.  
17 All of your ZonePlayers will then play the same music until you drop the  
18 zones from the zone group.



19 Kitchen and Garden make up a zone group

20 The music queue from the added zone is  
21 automatically replaced by the music queue from the  
22 zone or zone group it was linked to so that both  
23 zones play the same music

24 *Id. at 5-9.*

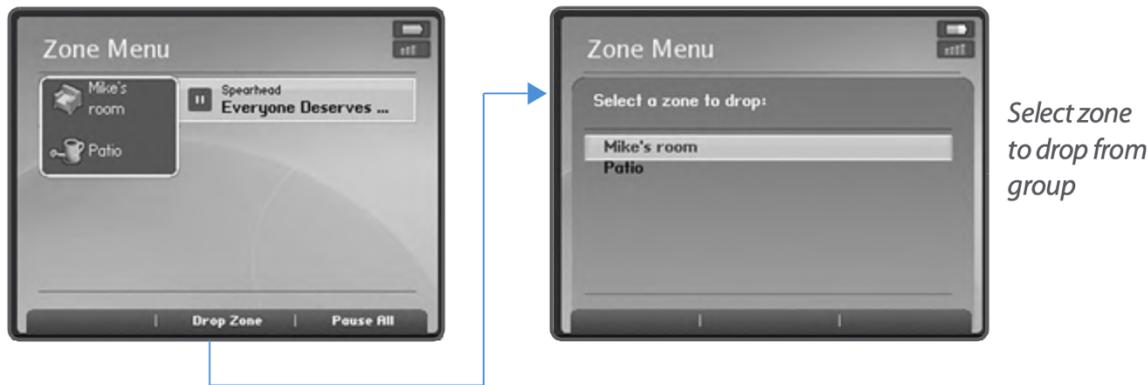
25 506. As demonstrated by the above excerpts from the Sonos 2005 User Guide, a user  
26 could create a new “zone group” using a Sonos controller by selecting a specific set of ZonePlayers  
27 (logically identified as zones) in a Sonos system to group together into the “zone group,” such as  
28 a Kitchen + Jack’s Bedroom group or a Garden + Kitchen group, and the act of creating this new

1 “zone group” would then “cause all the zones in the zone group to play the same music.” *Id.* at 3-  
2 11. Additionally, the Sonos 2005 User Guide notes that “[a]ny zones you link [into a zone group]  
3 will automatically drop their current music queue and begin to play the music queue from the  
4 highlighted zone,” and that if “there is no music playing” in the highlighted zone, then “any zone  
5 you link to it will also be silent.” *Id.* at 3-12, 5-8, 5-9.

6 507. The 2005 User Guide also explains that once a new “zone group” is formed and  
7 thereby activated, all of the ZonePlayers in the “zone group” “will then play the same music until  
8 you drop the zones from the zone group.” *Id.* at 5-9. The 2005 User Guide then goes on to describe  
9 the process “[t]o drop a room from your zone group” as follows:

10 **To drop a room from your zone group**

- 11 1. Touch the **Zones** button on your Controller.



- 19 2. Use the scroll wheel to highlight the zone group you want to change, and touch  
20 **Drop Zone**.  
21 3. Highlight the zone you want to drop from the group, and touch **OK**. The room  
22 that's removed from the zone group stops playing music. The other zones in the  
23 zone group continue unaffected.

24 508. As demonstrated by the above excerpt from the Sonos 2005 User Guide, once a  
25 ZonePlayer is removed from a “zone group,” that ZonePlayer “stops playing music” in accordance  
26 with the “zone group” while “[t]he other zones in the zone group continue unaffected.” *Id.* at 5-  
27 10.